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09/944,377	09/04/2001	Tsutomu Rokuhara	04329.2630	1292

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EXAMINER

PARRY, CHRISTOPHER L

ART UNIT PAPER NUMBER

2614

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/944,377

Applicant(s)

ROKUHARA, TSUTOMU

Examiner

Chris Parry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 06/26/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: S29 in figure 5 is not mentioned in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 4, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Roeck et al. (U.S. 6,574,796).

Regarding Claim 1, Roeck et al. teaches, "an interface configured to transmit and receive a data signal transported through said cable based on set frequency data" by tuner 504 in figure 5. Roeck et al. discloses the downstream channel is routed to tuner 504 where the tuner selects a particular input frequency from the downstream channel and outputs a radio frequency at the particular frequency (column 11, lines 54-65). The claimed "memory configured to store a frequency table for selecting a frequency matching the frequency of said data signal transmitted through said cable and having a cache area for saving frequency data which has been selected previously from said frequency table" is met by memory 512 in figure 5. Roeck et al. teaches the first downstream frequency that the modem checks is the most recently used frequency, stored in cache memory by the CPU in the cable modem. The cable modem can keep a list of recently used frequency channels and try each one of the frequency channels from the list. In another embodiment the downstream frequency can be chosen from a frequency list as described above (column 4, lines 53-66 and column 9, lines 51-60). The claimed "setting means configured to select matching frequency data from said cache area or said frequency table in said memory at start of communication to set said selected frequency data in said interface" is met by step 408 in figure 4. Roeck et al.

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teaches in step 408, the CPU in the cable modem sets its internal tuner to the potential downstream frequency determined in step 406 (column 9, lines 65-67). The claimed "saving means configured to save information indicative of frequency data in said cache area when said frequency data selected from said frequency table is matching" is met by Roeck et al. as disclosed is the modem checks cache memory for frequencies that were most recently used (column 9, lines 51-58). It is inherent that the cable modem saves the frequency data to cache memory after setting the downstream frequency.

As for Claim 4, the claimed "setting means sequentially searches said cache area for matching frequency data" is met by Roeck et al. as disclosed is cable modem stores recently used frequencies in cache memory and will try each one of the frequencies stored in cache memory (column 9, lines 53-56). Roeck et al. teaches "determining at predetermined intervals whether frequency data stored in the frequency table is matching" by disclosing it can take up to 500 milliseconds to check each potential channel (col. 4, line 67 – col. 5, lines 1-2).

Considering Claim 7, the claimed elements, wherein said cache area is sequentially searched for matching frequency data and determines at predetermined intervals whether frequency data in cache matches, corresponds with subject matter mentioned above in the rejection of claim 4, and is likewise treated.

Regarding Claim 8, the claimed "searching the cache area of the memory at start of communication, and when frequency data is stored in said cache area, setting said frequency data stored in said cache area in said interface, and when no frequency data is stored in said cache area, setting matching frequency data from said frequency table

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in said interface" is met by figure 4 in steps 406 and 408. Roeck et al. teaches the downstream frequency can be chosen from a frequency list (column 9, lines 42-67). The claimed "a data signal is successfully captured in said interface, saving said frequency data in said cache area" is met by step 406 in figure 4. Roeck et al. teaches the modem checks cache memory for frequencies that were most recently used. It is inherent that the cable modem saves the frequency data to cache memory after setting the downstream frequency.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roeck et al. in view of Laubach et al. (U.S. 6,081,533).

As for Claim 2, the claimed "setting means selects frequency data with priority in accordance with the information saved in said cache area, and when it is determined that said frequency data is not matching, said setting means sequentially searches said frequency table for matching frequency data" is met by steps 406 and 408. Roeck et al. teaches the first downstream frequency that the modem checks with priority is the most recently used frequency, stored in cache memory by the CPU in the cable modem and sets its internal tuner to the determined potential downstream frequency (column 9, lines 51-67). Roeck et al. is silent on what operation the cable modem performs if the

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frequency data in the cache memory does not match the frequency data. Laubach et al. teaches if all the frequencies in the preferred list have been tried and there are no matches, the STU performs a standard algorithmic seek process to find and acquire an available channel (column 14, lines 1-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Roeck et al. with the teachings of Laubach et al. to have the cable modem search the frequency table if the matching frequency was not found in cache to facilitate the cable modem finding a matching frequency since the matching frequency was not found in cache memory.

Considering Claim 3, the claimed elements setting means selects frequency data with priority in accordance with the information saved in said cache area, and when it is determined that said frequency data is not matching, said setting means sequentially searches said frequency data for matching frequency data, corresponds with subject matter mentioned above in the rejection of claim 2, and is likewise treated. Roeck et al. teaches "determining at predetermined intervals whether frequency data stored in the frequency table is matching" by disclosing it can take up to 500 milliseconds to check each potential channel (col. 4, line 67 – col. 5, lines 1-2).

Regarding Claim 5, the claimed "selecting frequency data with priority from said cache area of said memory at start of communication" is taught in figure 4. Roeck et al. teaches upon being powered up, the cable modem first goes through an internal initialization process at a step 404. At step 406, the cable modem identifies a potential downstream frequency. The first downstream frequency that the modem checks with priority is the most recently used frequency, stored in cache memory by the CPU in the

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cable modem. The cable modem can keep a list of recently used frequency channels and try each one of the frequency channels from the list (column 9, lines 42-58). The claimed "selecting matching frequency data from said cache area or said frequency table to set said selected data in said interface" is met by step 406 – step 408 in figure 4 (column 9, lines 51-67). Roeck et al. is silent on what operation the cable modem performs if the frequency data in the cache memory does not match the downstream frequency data. Laubach et al. teaches if all the frequencies in the preferred list have been tried and there are no matches, the STU performs a standard algorithmic seek process to find and acquire an available channel (column 14, lines 1-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Roeck et al. with the teachings of Laubach et al. to have the cable modem search the frequency table if the matching frequency was not found in cache to facilitate the cable modem finding a matching frequency since the matching frequency was not found in cache memory.

Considering Claim 6, the claimed elements wherein frequency data is selected with priority in accordance with the information saved in said cache area, and when it is determined that said frequency data is not matching, said frequency table is sequentially searched for matching frequency data, corresponds with subject matter mentioned above in the rejection of claim 5, and is likewise treated. Roeck et al. teaches "determining at predetermined intervals whether frequency data stored in the frequency table is matching" by disclosing it can take up to 500 milliseconds to check each potential channel (col. 4, line 67 – col. 5, lines 1-2).



**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents and applications are cited to further show the state of the art with respect to cable modems and making power and frequency adjustments.

U.S. Pat. No. 6,877,166 to Roeck et al.

U.S. Pat. No. 6,453,472 to Leano et al.

U.S. Pat. No. 6,230,326 to Unger et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Parry whose telephone number is (571) 272-8328. The examiner can normally be reached on Monday through Friday, 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner's Initials:

August 4, 2005

CLP

A handwritten signature in black ink, appearing to read 'J. Miller', with a long horizontal stroke extending to the right.

JOHN MILLER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600